

WORKSHOP #2 SUMMARY

AIRPORT PLANNING TECHNOLOGY EVOLUTION

NASA/Industry Airport Planning Workshop
Ames Research Center
September 8-9, 2005

WORKSHOP #2 OVERVIEW

- **VALUABLE DISCUSSIONS FROM 2 PERSPECTIVES**
 - Analytic – Modelers and Simulators
 - Operational – Airport Owner and Air Traffic Control Specialist
- **PRINCIPAL TOPICS**
 - Modeling and Simulation
 - Wake Turbulence
 - Airspace and Obstructions

SIMULATION AND MODELING

- **DO EARLY**
- **HELP NARROW OPTIONS**
- **DETERMINE/CHARACTERIZE BENEFITS OR LACK THEREOF**
- **UNCOVER “HIDDEN” ISSUES**
- **SAVE \$\$\$**
- **2 TYPES – FAST-TIME & REAL TIME**

FAST-TIME & REAL-TIME

- **USUALLY DO FAST-TIME THEN REAL-TIME**
- **FAST-TIME – ANALYTIC TOOL**
 - Quicker and Less Costly
 - Source of “Hard” Data (e.g., demand, operations, delay minutes)
 - Assumes “Perfect” Human Response
- **REAL-TIME – FOCUSED ON OPERATIONAL & SAFETY ISSUES**
 - Computer/Human Interface Development
 - Procedure Development
 - Usability Determination

SIMULATION & MODELING CREDIBILITY

- **FAST-TIME HUMAN PERFORMANCE MODELS**
 - Validation Initiated
 - Provide Added Realism
- **INVOLVE ALL STAKEHOLDERS EARLY, SEVERAL REPRESENTATIVES FROM EACH GROUP**
- **PERFORM OBJECTIVE PEER REVIEW**
- **USE GRAPHICS – GREAT AID TO EXPLAIN COMPLEX ISSUES TO DIVERSE AUDIENCES**

WAKE TURBULENCE

- **“USES” SIGNIFICANT CAPACITY THROUGH INCREASED SEPARATION STANDARDS**
- **METHODS TO DECREASE STANDARDS**
 - Detection
 - Manufacture “out”

AIRSPACE & OBSTRUCTIONS

- **SEVERAL, AND SOMETIMES CONTRADICTORY, OBSTRUCTION CLEARANCE STANDARDS**
 - Federal Air Regulations – Law
 - TERPS – FAA Standard
 - Operator Procedures
- **INTERPRETATION IS AN “ART”**
- **PORT OF OAKLAND DEVELOPED TOOL TO CLEARLY AND GRAPHICALLY DEPICT STANDARDS AND CONTRADICTIONS**
- **FAA IS AWARE OF ISSUES AND IS WORKING ON A RESOLUTION**